Appl. No.:   09/883,082
Amdt. Dated: 04/19/2005
Off. Act. Dated: 03/29/2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A method for routing data packets in a wireless network at a node i, comprising:

selecting a neighbor p as [[the]] a next hop in a route from node i to destination j if

(i)   the path from neighbor p to destination j does not include node i and does not repeat any node, and

(ii) $D^i_{yp} < D^i_{yx}$ for any other neighbor x and for all nodes y that are in the path from destination j to neighbor p,

where D^i_{yp} is the distance value of the route from node i to node y through neighbor p and D^i_{yx} is the distance value of the route from node i to node y through neighbor x.

2. (original): A method as recited in claim 1,

wherein a first node considers a second as its neighbor if it hears update messages from said second node; and

wherein said first node no longer considers said second node as its neighbor if said first node cannot send data packets to said second node.

3. (original): A method as recited in claim 1, further comprising:
sending updates to a routing table if

a node discovers a new destination with a finite and valid path to the
destination, or

a node loses the last path to a destination, or

a node suffers a distance increase to a destination.

4. (original): A method as recited in claim 1, further comprising:

sending a unicast routing table update from a node to a neighbor that
sends it a data packet, if the neighbor is upstream from it towards the
destination; and

sending a unicast routing table update from a node to a neighbor that
sends it a data packet when the path implied by the neighbor's distance table
entry is different from the path implied by the node's routing table.

5. (currently amended): A method for routing data packets in a wireless network
at a node i, comprising:

(a)   selecting a neighbor p as [[the]] a next hop in a route from node i to
destination j if

(i)   the path from neighbor p to destination j does not include node i
and does not repeat any node, and

(ii) $D_{yp}^{i} < D_{yx}^{i}$ for any other neighbor x and for all nodes y that are in the
path from destination j to neighbor p,

where D_{yp}^{i} is the distance value of the route from node i to node y through

neighbor p *and* D_{yx}^{i} is the distance value of the route from node i to node y

through neighbor x;

(b)   wherein a first node considers a second as its neighbor if it hears update
messages from said second node; and

(c)　　wherein said first node no longer considers said second node as its neighbor if said first node cannot send data packets to said second node.

6. (original): A method as recited in claim 5, further comprising
sending updates to a routing table if

a node discovers a new destination with a finite and valid path to the
destination, or

a node loses the last path to a destination, or

a node suffers a distance increase to a destination.

7. (original): A method as recited in claim 5, further comprising:

sending a unicast routing table update from a node to a neighbor that
sends it a data packet, if the neighbor is upstream from it towards the
destination; and

sending a unicast routing table update from a node to a neighbor that
sends it a data packet when the path implied by the neighbor's distance table
entry is different from the path implied by the node's routing table.

8. (currently amended): A method for routing data packets in a wireless network
at a node i, comprising:

(a)　　selecting a neighbor p as [[the]] a next hop in a route from node i to
destination j if

(i)　　the path from neighbor p to destination j does not include node i
and does not repeat any node, and

(ii)　　$D^i_{yp} < D^i_{yx}$ for any other neighbor x and for all nodes y that are in the
path from destination j to neighbor p,

where D_{yp}^i is the distance value of the route from node i to node y through

neighbor p *and* D_{yx}^i is the distance value of the route from node i to node y

through neighbor x; and

(b)   sending updates to a routing table if

(i)   a node discovers a new destination with a finite and valid path to the destination, or

(ii)   a node loses the last path to a destination, or

(iii)   a node suffers a distance increase to a destination.

9. (original): A method as recited in claim 8,

wherein a first node considers a second as its neighbor if it hears update messages from said second node; and

wherein said first node no longer considers said second node as its neighbor if said first node cannot send data packets to said second node.

10. (original): A method as recited in claim 8, further comprising:

sending a unicast routing table update from a node to a neighbor that sends it a data packet, if the neighbor is upstream from it towards the destination; and

sending a unicast routing table update from a node to a neighbor that sends it a data packet when the path implied by the neighbor's distance table entry is different from the path implied by the node's routing table.

11. (currently amended): A method for routing data packets in a wireless network at a node i, comprising:

(a)   selecting a neighbor p as [[the]] a next hop in a route from node i to destination j if

(i)   the path from neighbor p to destination j does not include node i and does not repeat any node, and

(ii) $D^i_{yp} < D^i_{yx}$ for any other neighbor x and for all nodes y that are in the path from destination j to neighbor p,

where D^i_{yp} is the distance value of the route from node i to node y through neighbor p and D^i_{yx} is the distance value of the route from node i to node y through neighbor x;

(b)   sending a unicast routing table update from a node to a neighbor that sends it a data packet, if the neighbor is upstream from it towards the destination; and

(c)   sending a unicast routing table update from a node to a neighbor that sends it a data packet when the path implied by the neighbor's distance table entry is different from the path implied by the node's routing table.

12. (original): A method as recited in claim 11,

wherein a first node considers a second as its neighbor if it hears update messages from said second node; and

wherein said first node no longer considers said second node as its neighbor if said first node cannot send data packets to said second node.

13. (original): A method as recited in claim 11, further comprising sending updates to a routing table if

a node discovers a new destination with a finite and valid path to the destination, or

a node loses the last path to a destination, or

a node suffers a distance increase to a destination.

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14. (currently amended): A method for routing data packets in a wireless network at a node *i*, comprising:

(a)   selecting a neighbor *p* as [[the]] a next hop in a route from node *i* to destination *j* if

    (i)   the path from neighbor *p* to destination *j* does not include node *i* and does not repeat any node, and

    (ii) $D^i_{yp} < D^i_{yx}$ for any other neighbor *x* and for all nodes *y* that are in the path from destination *j* to neighbor *p*,

where D^i_{yp} is the distance value of the route from node *i* to node *y* through neighbor p *and* D^i_{yx} is the distance value of the route from node *i* to node *y* through neighbor *x*; and

(b)   sending updates to a routing table if

    (i)   a node discovers a new destination with a finite and valid path to the destination, or

    (ii)   a node loses the last path to a destination, or

    (iii) a node suffers a distance increase to a destination;

(c)   wherein a first node considers a second as its neighbor if it hears update messages from said second node; and

(d)   wherein said first node no longer considers said second node as its neighbor if said first node cannot send data packets to said second node.

15. (original): A method as recited in claim 14, further comprising:

sending a unicast routing table update from a node to a neighbor that sends it a data packet, if the neighbor is upstream from it towards the destination; and

sending a unicast routing table update from a node to a neighbor that

sends it a data packet when the path implied by the neighbor's distance table

entry is different from the path implied by the node's routing table.

16. (currently amended): A method for routing data packets in a wireless

network at a node *i*, comprising:

(a)   selecting a neighbor *p* as [[the]] a next hop in a route from node *i* to

destination *j* if

(i)   the path from neighbor *p* to destination *j* does not include node *i* and does

not repeat any node, and

(ii) $D_{yp}^{i} < D_{yx}^{i}$ for any other neighbor *x* and for all nodes *y* that are in the path

from destination *j* to neighbor *p*,

where D_{yp}^{i} is the distance value of the route from node *i* to node *y* through

neighbor p *and* D_{yx}^{i} is the distance value of the route from node *i* to node *y*

through neighbor *x*;

(b)   sending a unicast routing table update from a node to a neighbor that

sends it a data packet, if the neighbor is upstream from it towards the destination; and

(c)   sending a unicast routing table update from a node to a neighbor that

sends it a data packet when the path implied by the neighbor's distance table entry is

different from the path implied by the node's routing table;

(d)   wherein a first node considers a second as its neighbor if it hears update

messages from said second node; and

(e)   wherein said first node no longer considers said second node as its

neighbor if said first node cannot send data packets to said second node.

17. (original): A method as recited in claim 16, further comprising
sending updates to a routing table if

> a node discovers a new destination with a finite and valid path to the
destination, or

> > a node loses the last path to a destination, or

> > a node suffers a distance increase to a destination.

18. (currently amended): A method for routing data packets in a wireless
network at a node *i*, comprising:

(a)   selecting a neighbor *p* as [[the]] a next hop in a route from node *i* to
destination *j* if

> (i)   the path from neighbor *p* to destination *j* does not include node *i*
> and does not repeat any node, and

> (ii) $D_{yp}^{i} < D_{yx}^{i}$ for any other neighbor *x* and for all nodes *y* that are in the
> path from destination *j* to neighbor *p*,

where D_{yp}^{i} is the distance value of the route from node *i* to node y through

neighbor p and D_{yx}^{i} is the distance value of the route from node *i* to node *y*

through neighbor *x*;

(b)   sending updates to a routing table if

> (i)   a node discovers a new destination with a finite and valid path to
> the destination, or

> (ii)   a node loses the last path to a destination, or

> (iii)   a node suffers a distance increase to a destination;

(c)   sending a unicast routing table update from a node to a neighbor that
sends it a data packet, if the neighbor is upstream from it towards the destination; and

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(d)   sending a unicast routing table update from a node to a neighbor that sends it a data packet when the path implied by the neighbor's distance table entry is different from the path implied by the node's routing table.

19. (original): A method as recited in claim 18,

wherein a first node considers a second as its neighbor if it hears update messages from said second node; and

wherein said first node no longer considers said second node as its neighbor if said first node cannot send data packets to said second node.

20. (currently amended): A method for routing data packets in a wireless network at a node i, comprising:

(a)   selecting a neighbor p as [[the]] <u>a</u> next hop in a route from node i to destination j if

      (i)   the path from neighbor p to destination j does not include node i and does not repeat any node, and

      (ii) $D^i_{yp} < D^i_{yx}$ for any other neighbor x and for all nodes y that are in the path from destination j to neighbor p,

where D^i_{yp} is the distance value of the route from node i to node y through neighbor p and D^i_{yx} is the distance value of the route from node i to node y through neighbor x;

(b)   sending updates to a routing table if

      (i)   a node discovers a new destination with a finite and valid path to the destination, or

      (ii)   a node loses the last path to a destination, or

      (iii)   a node suffers a distance increase to a destination.

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(c)   sending a unicast routing table update from a node to a neighbor that sends it a data packet, if the neighbor is upstream from it towards the destination; and

(d)   sending a unicast routing table update from a node to a neighbor that sends it a data packet when the path implied by the neighbor's distance table entry is different from the path implied by the node's routing table;

(e)   wherein a first node considers a second as its neighbor if it hears update messages from said second node; and

(f)   wherein said first node no longer considers said second node as its neighbor if said first node cannot send data packets to said second node.